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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,150	03/02/2004	David D. Brause	3123-552 (STL07651)	3169

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EXAMINER

WOLLSCHLAGER, JEFFREY MICHAEL

ART UNIT	PAPER NUMBER
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1791

MAIL DATE	DELIVERY MODE
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01/25/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/791,150	Applicant(s) BRAUSE ET AL.	
	Examiner Jeff Wollschlager	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 13-35 and 37-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 13-35 and 37-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/ are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

A petition to revive the application, which was abandoned for failure to reply in a timely manner to the non-final office action mailed August 8, 2006, was granted on October 31, 2007. Accordingly, an action on the merits follows.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 17, 2007 has been entered.

Response to Amendment

Applicant's amendment to the claims filed July 17, 2007 has been entered. Claims 1, 3, 29-35, and 37-39 are currently amended. Claims 10-12, 36 and 40-51 have been canceled. Claims 1-9, 13-35 and 37-39 are pending and under examination.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 17-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims include the recitation "actuator/coil assembly". It is unclear what

limitation this is intended to provide to the claim. For the purposes of examination the recitation is understood as "an assembly comprising an actuator and a coil".

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 17-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Arisaka et al. (U.S. Patent Application Publication 2003/0081355; published May 1, 2003; filed October 24, 2002).

Regarding claim 17, Arisaka et al. teach a method for making an assembly comprising an actuator and a coil for a data storage device comprising the steps of: disposing a coil and an actuator in a mold; executing a first molding step comprising molding a first molded part that structurally joins said coil to said actuator wherein said first molding step is executed within said mold; executing a second molding step comprising molding a bobbin/reinforcement plate/internal molding that structurally joins said coil to said bobbin, where said coil is disposed about at least part of said bobbin, and wherein said second molding step is executed within said mold; forming at least one adhesive receptacle in at least one of said first molded part and said bobbin during at least one of said first and second molding steps; removing said actuator, said first molded part, said coil, and said bobbin from said mold as a single unit after completion of

said first and second molding steps; and disposing an adhesive in said at least one adhesive receptacle after said removing step (paragraphs [0033, 0035, and 0041]).

As to claims 18 and 19, the first and second molding steps are executed simultaneously, and each comprises overmolding (paragraph [0033], Figure 3, elements (10 and 12)).

As to claim 20, the method taught by Arisaka et al. is such that said disposing step comprises increasing a stiffness of at least one of first and second interconnections wherein said interconnections are between said actuator and said coil and between said coil and said bobbin (paragraphs [0033, 0035, and 0041]).

As to claim 21, the disposing step taught by Arisaka et al. is executed without any fixtures to retain said coil in a predetermined position.

As to claim 22, Arisaka et al. teach that said forming at least one adhesive receptacle is such that a first adhesive receptacle intersects with a joint partly defined by one of first molded part and said bobbin/internal molding/reinforcing plate (paragraphs 0033, 0035, 0039, 0041).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 2, 4, 5, 7-9, 16, 29-34, 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jabbari et al. (US 5,734,528) in view of Thorson et al. (US 5,623,759).

Regarding claims 1, 2, 7, 8, 29, 33, and 37, Jabbari et al. teach a method of producing a disc drive actuator wherein a coil and bobbin are attached to actuator arms by an overmolding/injection molding process (Abstract). The actuator arms have apertures for better connecting the actuator and the coil/bobbin together. These apertures are injected with resin during the overmolding process (col. 2, lines 1-44; col. 3, lines 32-col. 4, lines 37; col. 6, lines 24-67). Jabbari et al. do not teach forming apertures (i.e. surrounding the original apertures with resin after the overmolding process) and subsequently filling the apertures with an adhesive.

However, Thorson et al. teach a method of providing better attachment between an actuator arm and the coil/bobbin by filling apertures with resin (Figure 1; Abstract; Figure 7; col. 3, lines 1-33).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have modified the method of Jabbari et al. and to have filled apertures formed after the overmolding process with an adhesive as taught by Thorson et al. since Thorson et al. suggest that employment of adhesive is an equivalent alternative means of providing a bond between an actuator and a coil/bobbin.

As to claims 4 and 30, the combination suggests the same claimed process steps and employs the same claimed materials. Accordingly, it follows that the same physical properties are present in the combined method (e.g. stiffness).

As to claim 5, Jabbari et al. dispose the coil and actuator in a mold (col. 6, lines 24-67) and remove them after molding them. The combination suggests filling the apertures with adhesive instead of resin after the overmolding step.

As to claim 9, the combination suggests the adhesive is formed on a perimeter (Thorson: Figure 3).

As to claim 16, the combination employs the same claimed steps and the same claimed material. Accordingly, the same claimed effects (e.g. wicking) would be realized by the practice of the combined method.

As to claims 31 and 32, Jabbari et al. teach forming apertures/notches in the actuator (Abstract).

As to claims 34 and 38, the combination suggests forming a plurality of apertures/receptacles (Jabbari et al: Figure 2C; Thorson: Figure 1).

Claims 3, 6, 13-15, 35 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jabbari et al. (US 5,734,528) in view of Thorson et al. (US 5,623,759), as applied to claims 1, 2, 4, 5, 7-9, 16, 29-34, 37 and 38 above, in view of Arisaka et al. (US 2003/0081355).

As to claims 3, 6, 13-15, 35 and 39, the combination teaches the method as set forth above. Jabbari et al. do not teach forming a bobbin with the overmolding material. However, Arisaka et al. teach the overmolding step comprises forming a first overmolded part, including a bobbin/reinforcement plate/internal molding that is attached to said coil by said overmolding step, wherein said coil is disposed about at least part of said bobbin (paragraphs [0033, 0035, 0041], Figure 3, element (11); Figure 7, element (15)).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have modified the teaching of Jabbari et al. and to have molded the bobbin during the overmolding step as suggested by Arisaka et al. for the purpose of forming a stronger and more uniform assembly in an art recognized equivalent manner.

Claims 23-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arisaka et al. (U.S. Patent Application Publication 2003/0081355; published May 1, 2003) as applied to 17-22 above, in view of Lin (U.S. Patent 6,867,950; issued March 15, 2005) and further in view of Foisy et al. (U.S. Patent 6,061,206; issued May 9, 2006).

As to claims 23-28, Arisaka et al. teach the method of claim 22 as discussed in the 102(b) rejection above. Additionally, Lin teaches a method of forming a bobbin with cleated features wherein said cleated features provide additional surface area for adhesive bonding and Foisy et al. teach a method of molding the bobbin together with the actuator and coil (col. 8, lines 29-45).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to employ the bobbin containing the cleated receptacles as taught by Lin in the method taught by Arisaka for the purpose, as taught by Lin of stiffening the coil assembly (Abstract). Additionally, it would have been *prima facie* obvious to directly mold the bobbin in the mold as taught by Foisy et al. for the purpose of eliminating a mold step. As such, the claims are rendered *prima facie* obvious over the combined teaching of the prior art.

Response to Arguments

Applicant's arguments filed July 17, 2007 have been considered, but are moot in view of the new grounds of rejection necessitated by the amendment.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Wollschlager whose telephone number is 571-272-8937. The examiner can normally be reached on Monday - Thursday 7:00 - 4:45, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571-272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JW

Jeff Wollschlager
Examiner
Art Unit 1791

January 21, 2008

af
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SUPERVISORY PATENT EXAMINER